Hospital Gleanings.

NEW MODE OF TREATING HYDROCELE.

MR. LLOYD, at St. Bartholomew's, often mentions to his class that the application he finds most effectual in private practice, in effecting the radical cure of hydrocele, is a small quantity of red precipitate on a probe or director introduced into the sac subsequent to its evacuation by the trocar. In a recent case at St. Bartholomew's, accordingly, the application was tried with very good effects. Mr. Lloyd believes it seldom or never fails. It requires no specific apparatus; it produces a certain amount of inflammation of the common kind in the serous lining of the sac, which effectually blocks up the cavity, and no ill effects of any kind are produced.

NEW OPERATION FOR PARACENTESIS IN DROPSY.

A new mode of "tapping", or performing the ordinary operation of paracentesis abdominis, recently adopted by Mr. BIRKETT, deserves a word of notice. Every surgical practitioner must be aware how commonplace and uninteresting this operation has become, and how very like the analogous process as regards a beer barrel; thus justifying in some measure the association of ideas with which the literal acceptance of the term, the process of "tapping", has come to be regarded by students and surgeons in operating theatres. Mr. Birkett proposes that the fluid should flow away by a piece of vulcanised India-rubber tube being slipped over a sort of flange on the canula, through which the trocar is passed; this piece of India-rubber tube fitted on to a further piece of tube of any convenient length, so as to carry the fluid away from the patient's bed. The finger and thumb are applied to the smaller piece of India-rubber tube, which is compressed firmly as the trocar is withdrawn, and this tube then fitted on to the longer piece of tube. The very unpleasant sound of a flowing stream of fluid is thus done away with; and where patients are not able to sit up to have the operation performed, it suits most admirably. It prevents air also, as in paracentesis of the chest, entering into the cavity.

MORBUS COXARIUS TREATED BY COUNTER-IRRITANTS.

Whether inflammatory diseases of the joints should be treated by counter-irritation, under the form of issues, setons, etc., appears a subject of much debate of late months in our London hospitals. One section of the profession, relying implicitly on the views of Sir B. Brodie, seem to regard the use of issues, setons, etc., with something allied to horror; while another class of not less practical men, led by their old experience, are still advocates for various counter-irritant processes. A very lengthened and most interesting controversy has just terminated in the French academy of surgeons, also on the subject of setons and issues, where M. Malgaigne has held with no little vigour that the usual arguments against the seton or issue have always hinged rather on the abuse of issues than their proper use.

In this point of view, two cases in St. Bartholomew's have afforded us more than usual interest, as illustrative of these opinions. One was a case of the too familiar disease in all our hospitals—a boy, George P., aged 4 years, admitted April 4, 1856—a case of "morbus coxæ", under the care of Mr. Skey; the orthodox plan in some hospitals is to let such cases alone; Mr. Skey, however, ordered a modified course of counter irritation to be tried.

We do not here give cases in full, but prefer offering short hints of the newest mode of practice. A mixture of equal parts of oil of turpentine and acetic tincture of cantharides was directed, as a liniment, to be rubbed every night round the acetabular articulation, while the other, but more ordinary *adjuvantia*, such as good diet, rest, tonics, etc., were also carefully prescribed, Mr. Skey commencing with vini ferri 3ij bis in die. Mr. Skey lays

great stress on the disease being diagnosticated early, in the first or early stage, before it shall have advanced to destruction of cartilage; in this latter stage counter-irritants, or indeed any mode of treatment, except such as facilitates the formation of false joint, will be inadmissible. A new idea of the action of blisters, setons, etc., has arisen out of the recent controversy, namely, that an issue acts beneficially, by exciting a reflex morbid or irritant action through the spinal or sympathetic system, or both, towards the blistered healthy skin, but away from or disappointing the morbid process in the diseased joint itself. In very advanced stages of such diseases, the actual cautery, as a counter-irritant, as used by Mr. Erichsen and Mr. Syme, will prove very beneficial. In the second case in St. Bartholomew's, under Mr. Paget and Mr. Stanley, very small bleedings by leeches were tried previously to counter-irritation, Mr. Paget believing that we have here a purely inflammatory condition of the joint and its coverings.

April 25th. Mr. Skey's case is now three weeks in hospital, during which we have watched its progress. The improvement has been most remarkable, and quite satisfactory.

WOUND OF THE URETHRA: OPERATION.

In a case of transverse laceration of the perineum in a boy, involving the urethra, Mr. BIRKETT had recourse to an operation, on the 18th instant, very similar to the operation of Syme. After the receipt of the injury, the boy stated that urine at first passed freely by the perineum, but since his admission into hospital very great difficulty was experienced in attempts at micturition, almost amounting to complete retention. Under these circumstances, and as all other means had failed, Mr. Birkett proposed to open the parts more freely, and pass a large catheter, which might be left in the parts permanently for some time. The boy having accordingly been placed under the effects of chloroform on the 15th instant, a director, bent at an obtuse angle to the handle, so as to facilitate the tilting up and slitting of the urethra, was gradually insinuated into that canal, on towards the bladder from the original wound; a very slight and careful incision was next made by a very small bistoury, when urine at once commenced to flow; an elastic catheter of good size was now passed down the anterior part of the canal to the wound, and guided along the director into the bladder, when the urine passed in a full stream. This form of treatment is found the best at Guy's where the case proves obstinate, though some other cases do not require much instrumental interference.

April 22nd. Through the kindness of Mr. Birkett, we were enabled to see this case again to-day. The operation seems to have been perfectly successful. K.

Original Communications.

OBSERVATIONS ON THE USE OF CHLOROFORM AS AN ANÆSTHETIC.

By A. B. STEELE, Esq., Honorary Surgeon to the Liverpool Blue Coat Hospital.

[Read before the Liverpool Medical Society, March 20th, 1856.]

ALTHOUGH the reputation of chloroform as an anæsthetic is fairly established, there are certain questions in reference to its mode of action, the peculiarities of some of its effects upon the system, and the principles which should guide us in its exhibition, which are still unsettled, and concerning which there is considerable difference of opinion. It is, therefore, desirable that those who have opportunities of noticing its effects in a large number of cases should record the results of their observations; so that, by comparing and generalising the facts noted by different observers, greater light may be thrown upon the doubtful and obscure phe-

nomena connected with the use of this powerful and important agent.

The remarks which I have to offer upon the subject are founded chiefly on observations made in fifty cases of which I have kept a record, and in which, during the last four years, I have administered chloroform for extraction of the teeth, and other operations in dental surgery. Such cases afford an opportunity of watching the effects of chloroform in a manner which, for obvious reasons, is seldom practicable in the more formidable operations of surgery. My experience, however, has not been limited to such cases, but includes those occurring in ordinary surgical and general practice.

The effect of chloroform, when inhaled in ordinary doses, appears generally to resemble somewhat closely that of ordinary intoxication, varying in its peculiarities according to the different temperaments of the individuals subjected to its action, in the same way as is observed in intoxication produced by alcoholic stimulants. But there is one distinctive feature in the action of chloroform, namely, that the stage of inebriation is accompanied by anæsthesia, more or less complete. I say the stage of inebriation is accompanied by insensibility to pain, because this latter effect is usually referred (erroneously as I believe) to a more advanced stage of chloroformisation: this is a point of considerable importance, which will be more particularly alluded to hereafter. The degree of excitement produced varies extremely, according to the mode of its exhibition, or the temperament and habits of the patient; in some cases the stage of excitement is prolonged and violent; in others, considerable depression accompanies and follows the period of its exhibition; and in a third class of cases, the patient falls almost immediately into a quiet sleep, insensible to pain, and unconscious of what is passing, from which, after a certain period, he awakes as from an ordinary slumber. The effect will sometimes vary in a remarkable manner in the same individual under different circumstances, dependent apparently upon the mental condition of the patient. An illustration of this occurred in the case of a man to whom chloroform was given twice—once previous to the removal of a calculus from the urethra, and once to facilitate the exploration of the bladder with the ordinary metallic sound; on both these occasions, the man was exceedingly violent and noisy, and a considerable quantity of chloroform was required to overcome the excitement, which rendered him quite unmanageable. On a third occasion, this man was placed under the influence of chloroform preparatory to the operation of lithotomy; and in this instance the stage of excitement, if it existed at all, was very slight; he became gradually insensible with but little noise or struggling. The different effects of the chloroform in this case are no doubt referrible to the mental condition of the patient. He was an intelligent man, and well aware of the nature of the operations to which he was about to be subjected; and on the last occasion a natural feeling of dread operated as a powerful depressant to his nervous system. This modifying influence of the mental condition of the patient should not be overlooked. It is desirable to allay as much as possible the apprehensions of our patients, where they exist, and to endeavour to inspire them with confidence in the safety of the remedy, and as to their perfect immunity from pain, otherwise an unfavourable, if not dangerous degree of depression might result from the effects of inordinate fear. Besides which, an excited or apprehensive frame of mind materially interferes with the satisfactory progress of inhalation, and renders a much larger quantity of chloroform necessary to produce the desired effect. Dr. Snow has certainly stated that in the use of chloroform fear is not productive of any danger, because it gradually subsides as the inhalation proceeds, and no doubt this is usually the case, but we cannot define the exact period over which the effects of shock from fear may extend; all external indication of apprehension would no doubt disappear when the patient became unconscious, but the system may still be suffering from the effects of shock. In some of the cases in my experience the anæ-

sthetic condition has been accompanied by very great depression, and in such I believe the precautions before mentioned can scarcely be deemed unnecessary. As before observed, any kind of mental disturbance appears to interfere very much with the action of chloroform. In hysterical, excitable females especially, very distressing symptoms accompany its exhibition. A large quantity of vapour must be inhaled before the desired effect is produced, and there is, in such cases, a tendency to syncope, and general depression, which sometimes lasts for a considerable time after the operation.

There is one peculiarity which sometimes accompanies the anæsthetic condition, and which has been urged as an objection to the general use of chloroform. I allude to the erotic emotions which undoubtedly are occasionally produced. The result of my own observations leads me to believe that the occurrence of these is exceptional, and that it constitutes no serious objection to the judicious employment of an agent having so many important advantages to recommend it. I have seen but two cases in which there was any decided manifestation of the condition referred to. One of these was a female in the lock wards of the workhouse, whose antecedents rendered the occurrence but little surprising. The other was a young man, who was known to have been in the habit of exerting but little control over his passions. The fifty cases before alluded to comprised young persons of both sexes, single and married, and of various temperaments; but in none, with the exception of the young man just mentioned, was there any perceptible indication of sexual excitement.

Unpleasant symptoms, however, may sometimes occur. A medical friend related to me the case of a young lady to whom he gave chloroform previous to the extraction of a tooth, and who while under its influence threw her arms round his neck, and addressed him in such terms of endearment, that he, being a married man, thought it prudent to make a precipitate retreat from the room, leaving the young lady to the consolations of her mamma, who fortunately was present. In the *Psychological Journal* for October 1855, some cases are recorded in which there were very decided evidences of sexual excitement occurring during the anæsthetic condition. The fact that chloroform does occasionally produce these effects, although no objection to its proper use, ought certainly to render us cautious in the mode of using it, and especially indicates that prudence would suggest the propriety of providing against any disagreeable consequences which might ensue in such cases, by insisting upon the presence of a third party whenever the patient is to be subjected to its influence is a female. It is probable that to the neglect of such a precaution is to be attributed a most distressing affair which occurred somewhat recently in America, in which a surgeon dentist was accused and convicted of having taken improper liberties with a lady, whom he had placed under the influence of chloroform preparatory to some dental operation.

In reference to the question, In what manner does chloroform produce death? much difference of opinion exists. Mr. Edward Bickersteth, and others, have arrived at the conclusion, from experiments on the lower animals, and observations in the human subject, that death, when caused by chloroform vapour, is the result of paralysis of the organs of respiration, and that the stoppage in the heart's action is simply consequent upon the cessation of breathing. This explanation seems to be perfectly correct, and borne out by facts in a certain number of instances; but it is stated by Dr. Snow that the results of his experiments and observations show that although chloroform vapour undoubtedly may, and has proved fatal, by paralysing the respiratory organs, yet this is only one kind of fatal anæsthesia, and that chloroform vapour, when introduced into the system rapidly and in large quantity, destroys life by direct paralysing the heart's action. Both these gentlemen perhaps are right to a certain extent; but it seems to me that in endeavouring to "localise", as it were, the fatal action of chloroform, its effects on the brain and nervous system at large have not been sufficiently taken into the

account. It might surely be expected that an agent capable of producing such powerful effects upon the brain as to suspend sensation, and upon the spinal cord or motor nerves as to cause temporary paralysis, might also, under certain circumstances, prove fatal by its direct action upon the nervous system generally.

It has been already observed that the effect of chloroform vapour is analogous to that of alcoholic stimulants; that it is, in fact, an inebriating stimulant. Now we know that whatever may be the ordinary mode in which alcoholic stimulants act as poisons, under certain circumstances they produce death almost immediately, by some direct specific action, probably upon the nervous system. I remember a case which occurred whilst I was a student, in which, for a wager, a man drank a quart of gin at a draught, and he died almost immediately; his body was sent to the dissecting room at St. George's Hospital School of Anatomy. In the same way I apprehend that chloroform vapour, when suddenly introduced in the system in large quantity, may produce instantaneous death by a specific action of the nervous system, without any direct effect either upon the heart or the respiratory organs.

I have witnessed certain cases in which chloroform produced convulsions of an alarming character; and although no fatal case has come within my knowledge, I have seen one, and heard of others, in which it was thought that the patient had a very narrow escape. The patient, in such cases, seems to be in danger of dying from a condition the very reverse of paralysis, namely, from a turgid condition of the large vessels of the head and neck, caused by uninterrupted spasmodic muscular action; a condition which has been particularly described by Dr. Marshall Hall under the term *trachelismus*. A slight degree of this condition is not uncommonly seen in ordinary cases of inhalation of chloroform, and must be familiar to every one accustomed to its use.

The different views which have been taken of the manner in which chloroform vapour causes death have, as might be expected, given rise to various directions as to the mode of its exhibition and the precautions to be observed in its use. By some we are told that the state of the pulse is the most important indication, and that the finger should be kept to the wrist during the whole period of inhalations; others think that the pulse needs little or no attention, provided the respiration be closely watched. Some insist upon the importance of exhibiting the vapour rapidly and freely, so as to bring the patient as speedily as possible under its influence, thus shortening, or altogether avoiding the stage of excitement which usually occurs where it is given more slowly; others recommend a more gradual exhibition of the vapour, and Dr. Snow especially advises the use of an apparatus so constructed as to define the proportion of vapour inhaled; or if this be dispensed with, he suggests that the chloroform should, previous to inhalation, be diluted with alcohol. The present state of our knowledge will probably not suffice to enable us satisfactorily to discriminate and decide amongst these conflicting opinions. I shall not, therefore, venture to criticise the opinions of others upon this point, but content myself with stating the conclusions which my own experience and observation have led me.

One of the most important points in administering chloroform undoubtedly is a close and continuous observation of the respiratory movements; for it is, I believe, quite satisfactorily established that one mode of death from chloroform occurs from the gradual cessation of that function. I have sometimes found it necessary to place one hand on the upper part of the thorax, to feel the heaving of the chest, as the breathing sometimes becomes so tranquil and subdued as not to be readily observed. I may mention here that, very recently, I witnessed a remarkable illustration of the importance of paying close attention to the breathing. A female was inhaling chloroform, and undergoing the operation of resection of the elbow-joint. In the course of the operation the gentleman who was conducting the inhalation requested the operator

to suspend his proceedings, as he noticed some peculiarity in the patient's appearance, and it was soon evident that respiration had almost, if not entirely ceased; the pulse meanwhile continued unaffected. The cold douche, however, and drawing forward the tongue, excited respiratory movements, and the case terminated favourably; but, beyond all doubt, the girl's life was altogether dependent upon the vigilant eye of the person conducting the inhalation; and had he been less prompt in discovering the failure of the respiration, a fatal issue might have resulted.

While urging the importance of attention to the breathing, I would by no means neglect or overlook the condition of the pulse. It should be examined from time to time; for although, in the majority of cases, no notable alteration occurs, yet I have several times thought it necessary to suspend or discontinue the inhalation in consequence of the pulse becoming very slow and exceedingly feeble. The countenance also, and indeed the general condition of the patient, should be carefully watched. Extreme pallor of the face is sometimes noticed, and indicates the approach of syncope; which, if neglected, might prove dangerous. The means to be adopted in such cases are too obvious to need mention.

As to the mode of inhalation, I have almost invariably adopted a simple and convenient plan, first suggested, I believe, by my neighbour, Mr. Rose, Dentist. It differs but slightly from the very common method of using a napkin or handkerchief: it consists of a piece of lint, covered on the outside with vulcanised India-rubber, which prevents evaporation from the upper surface of the lint, thus avoiding a waste of chloroform, and protects the operator and bystanders from the participating in the process. The objection which I feel to the use of an apparatus such as that recommended by Dr. Snow is, that its appearance is likely to alarm patients—a point, in my opinion, of great importance; and I have found the simple mode of inhalation, when carefully conducted, so successful and so safe, that I feel disinclined to adopt any other plan, especially when the innovation seems to me to be qualified by a serious practical objection. The inhalation should, in my opinion, be conducted cautiously, so as to produce its effects gradually, and not, as has been recommended, in a rapid and sudden manner. The pulse, respiration, and general condition of the patient should be carefully watched, and the lint occasionally removed from the face, especially if coughing, choking, or any sign of distress occurs. It has been thought that a recumbent position is more favourable to the action of chloroform, and that convulsive action and great excitement are less likely to occur than when the patient is in an upright position; but I have not myself found the sitting posture attended with any special disadvantage, although, whenever the nature of the operation permits, I should certainly prefer to have the patient lying down, as, in such a situation, syncope is far less likely to occur. The most important point, in my opinion, to be borne in mind in administering chloroform is not to carry the anæsthetic condition to its full extent; in this, I believe, consists mainly, if not entirely, the whole safety of the process.

Although I do not feel justified in asserting dogmatically that the stage of inebriation from chloroform is totally free from danger, and is consequently never fatal, I am strongly inclined to think that future observation will establish the fact that this species of intoxication is not more dangerous than the ordinary intoxication from alcoholic stimulants; and that, by keeping within the limits of this primary effect of chloroform, we may assert that there is no greater risk of life in subjecting a patient to the inhalation of chloroform vapour than there would be in making him tipsy in the ordinary way.

It will doubtless be argued, that cases have occurred in which patients have died after a very small quantity of vapour has been inhaled, and in whom its effects were by no means carried to an extreme extent. To this I would reply, that, in the first place, such cases are extremely

rare, so rare as not materially to affect the position; and, secondly, that, even in these cases, we have no positive proof that chloroform was really the cause of death. Long before chloroform was thought of, patients have died suddenly during or immediately after surgical operations, without any assignable reason, unless perhaps we choose to assume shock as the cause. I may mention a very striking case which occurred within the last few years in a public institution in this town, where a man died on the table, after the operation for strangulated hernia, without any assignable cause, the operation being unattended with any difficulty or unusual circumstances, and in which, from some accidental cause, chloroform had not been given. Beyond all doubt, if this patient had inhaled chloroform previously to the operation, his death would have been attributed to that cause. A similar explanation may possibly be equally applicable to other cases, especially to those where death has occurred almost instantaneously after the inhalation of a very small quantity of vapour.

But, whatever doubts may exist as to the entire absence of danger in the early or intoxicating stage of chloroformisation, it will be readily admitted that, by limiting its action to that stage, we escape the graver sources of danger which accompany the fully developed anæsthetic condition, approaching more or less nearly to coma. The only question that remains is, whether the first or intoxicating stage is sufficient to save patients from the sufferings consequent upon a prolonged and painful operation. I believe that it is so; and to this point especially I invite the attention of all those who are in the habit of administering chloroform, as I consider it worthy of trial and consideration, inasmuch as, if my views can be sustained and confirmed by the experience of others, the exhibition of chloroform will be much simplified and less hazardous. I have in a considerable number of instances noted the fact that persons who are only in the intoxicating stage of anæsthesia, before entire loss of consciousness, or stupor, comes on, are entirely insensible to pain. Patients will often struggle, resist, and call out, exactly as they would in an ordinary condition; and yet, when they are entirely restored to consciousness, they declare they have felt no pain: some say they felt something, or they knew all that was going on, but that they had no power to resist; but all agree in stating that they do not suffer pain. At first, I used to fancy this was a delusion and that probably, from not carrying the inhalation to its full extent, imperfect anæsthesia only was produced; but since my attention has been particularly drawn to the point, I have had many opportunities of noticing that the behaviour of patients under the influence of chloroform is a most fallacious criterion of their real feelings as regards physical suffering. A most satisfactory opportunity of verifying this occurred some months ago in my own person. I inhaled chloroform previously to having an abscess in the axilla lanced; and while inhaling during the operation, I kept trying to pull away the operator's hand, and struggled and called out so lustily that persons in an adjoining room ran in to see what was the matter. On recovering my senses, the first indication I had of what had been done was perceiving a little blood on my arm. I had no perception even of an unpleasant dream, and was perfectly astonished when my friend described my unconscious actions. No person, he said, unacquainted with this peculiarity of the anæsthetic condition could have been persuaded that I did not suffer pain, or that my efforts to resist the approach of the cold steel were not really excited by a conscious dread of suffering.

A gentleman was subjected to chloroform, and had a tooth extracted. He started up, put his hand to his cheek, just as a man in his senses would do; and I concluded we had been too hasty; but he began to stagger about the room, and talk like a man who had had a few extra glasses of wine; so I went up to him, and said, "Now, sir, sit down in the chair, and take a little more." He obeyed, inhaled a few seconds longer, and another tooth was extracted, without any indication of suffering. After the effects had passed off, our patient assured us that he was

quite unconscious of both operations, and had no recollection whatever of having left his seat.

Not many days ago, I was called upon to administer chloroform to a lady who had sixteen teeth or roots of teeth extracted. She was a very nervous, excitable subject, and resisted the action of the vapour for some time; and during the extractions, and indeed during the greater part of the time, she screamed and struggled very much, but, when all was over, declared she had suffered no pain.

It has not unfrequently happened that the friends witnessing the operations cannot be convinced of the insensibility to pain until the patients themselves are sufficiently recovered to give their own statement. In the case of a robust, strongly built young man, we had to call in a third assistant to hold him; and the teeth were extracted just as much by main force as if he had been quite conscious, and had fully determined to resist our assault upon his jaw. He roared out most lustily, but afterwards declared he felt no pain, and had no recollection of making any resistance.

It is a common occurrence to find the mouth rigidly closed just as the operator proceeds to fix the instrument, and considerable force may be required to open it; and I have seen several instances where, after vain attempts to separate the jaws by force, the operator has said, in a loud firm voice, "Open your mouth"; the patient has at once obeyed, and sat quietly while several teeth have been extracted, without any indication of pain. It may perhaps be thought that these cases seem to partake somewhat of the marvellous; but I can only say that any person who is in the habit of giving chloroform in such cases may easily satisfy himself of the reality of their occurrence.

I am glad to be able to refer to an authority so high as that of Professor Murphy, of University College, who appears to have met with cases which corroborate the statements just made. In a paper read before the Medical Society of London, and published in the ASSOCIATION JOURNAL of 2nd February, 1856, he mentions the case of a lady in her fourth confinement, which illustrates the point, and which I therefore, with your permission, will relate in his own words:—"I was summoned to her rather late, and, when I entered the room, found her in the middle of a very severe pain. I at once gave her chloroform, which she inhaled with avidity, but apparently without any relief; she cried out rather more than before. I continued, however, to administer it with each pain. She exclaimed loudly during the pain, but slept in the intervals profoundly. At length I observed stertor in the sleep, and withdrew the chloroform. The child was born, and, on placing my hand on the fundus of the uterus, to assist in the expulsion of the placenta, she cried out just as loudly. When it was removed, my patient lay asleep, but moaning at intervals, as if she were in pain. After some hours, she awoke, and had no recollection of anything that happened from the time she first inhaled chloroform."

In this case, no doubt, as in those I have related, the patient was perfectly insensible to suffering, notwithstanding appearances to the contrary. Dr. Murphy regards it as an exceptional case, and seems to attribute it in some measure to the circumstances under which the inhalation was commenced; for he adds, "I never afterwards gave chloroform to a patient in the middle of a pain." My observations lead me to believe that such cases are more common than is generally supposed, and I invite attention to the point, as being of much interest and importance. It is not easy to pronounce how far anæsthesia has really existed until patients have sufficiently recovered to give an account of their own feelings. I am satisfied that, from not fairly recognising this peculiarity in the effect of chloroform, inhalation is often carried further than is necessary. In surgical operations, I have often noticed that, if the patient calls out or struggles, it is regarded as an indication for more chloroform, and the patient is needlessly subjected to a more profound degree of stupor, by which the danger is unquestionably increased. As I have before remarked, for all the purposes of humanity, the first degree of chloroformisation is probably sufficient; at all events, I think the

experiment is worth trying. One difficulty, no doubt, would arise in some instances from the violence of the patient's struggles, which are often such as to require considerable force to hold him; but this obstacle might, I believe, be overcome with less risk than that incurred by throwing him into a state of coma. I may mention, that I have observed results similar to those in Dr. Murphy's patient in a case of my own, where a lady was delivered with the forceps under chloroform, and who exhibited every indication of suffering during the operation, but who, after all was over, declared that she had felt little or no pain. The suggestion I wish to throw out is, whether, in the use of chloroform, we may not insure a greater degree of safety by limiting its effects to the earlier stages of anaesthesia, without depriving our patients of all its beneficial effects. I will not venture definitely to decide this question, but I commend it to the consideration of those who may have the opportunity of confirming or negating the position. It may be considered that, as the cases upon which I have mainly founded my observations are of so simple a nature as the extraction of a tooth, the test has not been a fair one; but a little consideration will, I think, show that scarcely any surgical proceeding can afford a much better proof of insensibility to pain. The operation, it is true, is very short in duration; but I question if any pain is for the moment more acute, and more difficult—or I would say, impossible—to be borne without the slightest shrinking or indication of consciousness, than that of passing the jaw of the tooth-key or forceps between the neck of a tooth and its surrounding gum, especially when one or both of those structures, as is usually the case, are in a state of exalted sensibility, from a greater or less degree of inflammation. Moreover, I may observe that, in the more serious operations of surgery, such as lithotomy and the amputation of the breast, I have been able to notice the same peculiarities as those I have specially alluded to as occurring in dental operations.

In conclusion, I would remark, that if my views should be borne out by future observations, the objection to the use of chloroform in certain operations connected with the face and mouth will be got rid of; for I am quite satisfied that, if the first stage only of chloroformisation be produced, there will be no risk of insensibility of the epiglottis, and consequent danger of blood entering the trachea: indeed, in many of the operations I have conducted, there has been considerable hæmorrhage within the mouth, quite sufficient, in fact, to cause death, if the epiglottis had failed to perform its function.

CASE OF AMPUTATION OF THE LEG, IN WHICH NO LIGATURE WAS USED.

By CHARLES HOLMES, Esq., M.R.C.S.Eng., Chipping Norton.

CASE. On the evening of the 23rd February, 1856, I was requested by Mr. H. to visit T. C., a boy 12 years of age, to whom he had been called, on account of an injury from a thrashing machine. The lad was in much pain, and somewhat faint; but I was informed there had been little loss of blood. I found an incision above the ankle, encircling the limb, and the skin reflected over the toes laying bare the extensor tendons of the foot; in addition to which there was compound dislocation of the ankle, with displacement, and comminuted fracture, of the astragalus. Any hope of saving the limb being out of the question, and the position in life of my patient rendering the possession of an artificial foot a matter of uncertainty, I proceeded six hours after the accident, to amputate by the circular operation at the middle of the leg. On loosening the tourniquet, there was a slight oozing from the surface of the stump, but no appearance of arterial blood could be detected. At the expiration of fourteen hours, the boy in the meantime having some quiet sleep, and expressing himself as feeling well, the edges of the wound were brought together by slips of soap plaster, and kept in position by a few turns of a bandage.

Feb. 25th. Going on well.

Feb. 29th. Dressed the stump. Looking well.

March 1st. Has suffered from violent diarrhoea during the night, probably occasioned by irregularity of diet. Ordered a mixture of chloric ether, and aromatic confection. Wound painful.

March 2nd. Diarrhoea less. Continue mixture. Two ounces of port wine daily. Some sloughing of integuments. Apply a bread poultice.

March 4th. Wound healthy.

From this time, nothing worthy of record occurred, and the wound is now (March 27th) almost entirely healed.

REMARKS. In speaking of the comparative merits of the circular and flap operations, Fergusson states that the only instance in which he has seen "a single ligature alone required in the thigh was a circular operation". Sir George Ballingall and others have also asserted that the vessels retract more completely in the circular operation, and the above case would certainly support such an opinion. This superiority being admitted, it is to be considered if it counterbalances the advantages peculiar to the flap; and I confess my experience does not enable me to speak on the subject. I may observe, that chloroform was not given in this case, as I had not the necessary assistance at hand: indeed, the operation was performed by the light of a small candle held by a female.

COMPLICATED CASE OF BRIGHT'S DISEASE.

By J. L. W. THUDICHUM, M.D.

[Read before the Medical Society of London, March 29th, 1856.]

Mrs. L., aged 65 years, had been attended by a physician in London. She had been ill three months: at first she had anasarca, which, however, disappeared, and heart-disease became the prominent feature of the case. The leading symptoms which preceded death are interwoven in the comments on the *post mortem* appearances.

The necropsy was made by me, sixteen hours after death. On inspection of the body, I noticed a bed-sore at the back of the head; it was a part of the covering of the skull, of about the size of a crown-piece, in a state of inflammation and diffuse suppuration, extending to the bone. This had no doubt been caused by the patient having never been able to sit up, and latterly not even to lie on either side. There was no bed-sore on any other part of the body, owing to the layer of fat underneath the skin being very much developed. There was no partial or general discoloration of the skin, which is a matter of some interest, as both the supra-renal capsules were found to be diseased. On the abdomen, an umbilical hernia of considerable size presented itself.

On opening the head, there was found general œdema of the arachnoid; but no other lesion of the brain or its membranes was discovered, to which the spasmodic fits and paralytic symptoms on the left side, and principally on the left part of the face, which were observed during the last days of her illness, might have been referred. But the œdema of the arachnoid and the state of the kidneys, to be described hereafter, are perhaps sufficient to account for the latter.

The heart was found very much enlarged in all its parts, and none of the openings seemed to have been closed any longer by its valves. Both ventricles and auricles were much distended by clotted dark blood. In the right auricle was found the shell of what had been a fibrinous clot, but which evidently had softened and burst, and discharged its contents into the general mass of the blood. The blood must have carried the matter to the lungs, and there caused the peculiarly sudden and severe inflammation which had been diagnosed during life by percussion, and by the bloody sputa, which mostly consisted of dark blood only, and differed little from the sputa in tubercular hæmoptysis.

The right lung was throughout adherent to the thorax; its upper half was in a state of intense hepatisation, with